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ATARI

Applying The Atari

by Jeff Brenner

This month we have a handy mailing list program featuring search, editing and double-width label printing capabilities. We'll also learn more about last month's Multi-Luminance program and answer some reader mail.

Programming Tip Correction

M. Rose's programming tip printed in April's column (page 56) said to SAVE a renumbered program from Microsoft BASIC and then ENTER it back in with Atari BASIC.

```
MAILING LIST PROGRAM

ADD NAMES

EDIT

PRINT

LIST NAMES

FREE DISK MEMORY

SELECT:
```

Figure 1

However, as several readers keenly discovered, in order for Atari BASIC to read the program, Microsoft BASIC must have saved the program in an untokenized format. The LIST command, not the SAVE command, must be used for the program to be stored on disk or cassette in the untokenized form. The corrected procedure for using Microsoft BASIC to renumber a program written in Atari BASIC follows:

First, LIST your Atari BASIC program on cassette or diskette. Boot up with Microsoft and LOAD the program. Execute the RENUM command and LIST the renumbered program back to cassette or diskette (LIST"C:" or LIST"D:filename"). Then ENTER the program back in with Atari BASIC. Microsoft will renumber all Atari BASIC statements with line numbers except for the TRAP statement.

Reader Mail

I hesitate buying disk programs that can't be copied. If I pay that kind of money for a program, then I feel that I should have the right to make a backup copy, as I did with my DOS 3. If you are familiar with a method that will produce backups, please let me know.

Elwood Ethridge
Georgetown, SC

For making backup copies without expensive disk drive modifications, independent diskette duplicating machinery, and the like, I can only recommend that you try using the "Duplicate File" option from DOS. Today's computer software for the Atari is highly protected from most copying schemes, and the majority of so called "copy programs" that I have tested in the past are not any more successful than DOS in making backups.

A program's ability to be copied should not be of consequence when deciding whether or not to purchase the program. In many cases, the better a program is, the more difficult it is to copy, since the manufacturer puts more work into protecting it.

I have always supported manufacturers' use of copy-protection methods except in cases where the legitimate user is inconvenienced.

Software piracy makes copy-protection a necessity. Indeed, piracy has contributed to the decline in good software titles being released for the Atari today. It is also responsible for the high cost of new computer programs. Ultimately, copy-protection is in the best interests of both the software manufacturers and the legitimate users.

As a former owner of an Atari 800 system who has recently purchased an Atari 800XL, I am very upset with the lack of documentation included with the XL. My 800, I recall, came with a manual describing the BASIC commands and other useful information. My XL, however, included basically a set-up guide

Continued on page 48

```
EDIT

Computer Shopper
FULL NAME

P.O. Box F
ADDRESS

Titusville, FL  32781
CITY/STATE/ZIP

MAGAZINE
CATEGORY

SEARCH FOR WHAT NAME?Shopper
FOUND
PRESS > TO MOVE FORWARD
PRESS < TO MOVE BACKWARD
PRESS ESC FOR MENU
```

Figure 2

Berserker Raids

Review by Jeff Brenner

When I received the package from Simon and Schuster, I couldn't wait to open it. One of the best known book publishers in the industry couldn't produce anything less than a masterpiece in computer software, I thought. Upon opening the package, my enthusiasm grew. The software product was manufactured like a book, polished hardcover and all, consisting of spiral-bound documentation and a diskette in a plastic sleeve.

Well, I am now convinced that Simon and Schuster had some sort of mission in making this product look like a book - possibly to emphasize the validity of the maxim, "Don't judge a book by its cover," when applied to computer software. Indeed, **Berserker Raids** has exemplified that computer software packaging can fool the eye as much as any attractive bookcover can.

Berserker Raids

Perhaps Berserker Raids would be most enjoyed by those familiar with the series of books and stories about the berserkers. These stories were written by Fred Saberhagen, whom the product cover describes as a world-famous science fiction author. (The programmer, Lloyd Johnson, is described as a "first-rate science fiction programmer" - of course!")

The berserkers are space-warrior robots with orders to destroy all life forms in the universe. The game situates you in a galaxy of ten stars in which you, your opponent, and the berserkers are each trying to gain control.

The Game

At the start of the game, you are asked to input a variety of game parameters, including the number of players, the number of berserkers and the power of the berserkers. Next, a "map" of the ten stars appears. The stars that you control are represented by plus (+) signs, while the other stars are represented by asterisks. I'll talk about these crude graphics later.

The first thing you'll want to do is build some ships on your star base. The manual lists a variety of ships that can be built, ranging from a simple, unarmed merchant ship to a full-fledged battleship. Depending upon the complexity of the ship, construction can take anywhere from two to over 40 years. The first ships you'll build are unarmed merchants, since these require the shortest time to build and can be used to transport materials to other star bases.

Allocating Resources

Each star base has a certain number of base points, a technology level and a productivity index. The more base points a star base has, the more able it is to defend itself from attack. Bases with 40 or more points can construct their own ships. Merchant ships can be used to bring cargo to any star base to give it the 40 base points necessary for building more ships. Each merchant ship can carry cargo worth up to ten base points.

The technology level of a star base determines the effectiveness of the weapon systems on the ships constructed on that base. This factor becomes apparent later in the game when your ships must battle your opponents's ships or the berserkers. The beams and missiles of ships built by a base with a high technology level will be much more accurate than those of the ships built on lower-technology bases. The productivity index measures how rapidly the base can build ships.

The owner of a star base can allocate the base's resources among technology (increasing the technology level), productivity (increasing the productivity level), and the construction of ships. At the beginning

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I Touched The New Atari 520ST Computer

by Clay Houston

Last night, I touched, fondled, played with and generally fantasized with the NEW Atari 520ST computer.

Versatile Video in Dunwoody Village, in Atlanta, Georgia and the C.O.N.T.A.C.T. user group of Atlanta pulled the local computer coup of the year by arranging for Steve Cart of Parades, the southeastern distributor for Atari to give a HANDS-ON demonstration of the new Atari 520ST and the 130XE computers. The presentation was held two evenings, 1 and 2 April 1985 by reservations only and as expected, was very well attended. This will be an attempt to pass on what I saw, heard and did at the presentation.

Steve brought a prototype (No. 13) 520ST supported by a 3½ inch 500K floppy disk drive and an Atari RGB monitor and a production 130XE supported by a standard 1050 disk drive, a two button Mouse and an Atari hi-resolution RGB monitor. He had a small amount of support/demonstration software but it was highly guarded as Atari's policies seem to heavily control all future software. This may not be too bad since all software will be under $80 and $50 for the two units, respectively. If the real software lives up to the demo stuff, it will be worth it.

520ST Computer

The 520ST presentation was centered around the Desk Top Manager system having many obvious comparisons to the Mac but in COLOR! The DTM uses ICONs and the GEM system developed by Digital Research as the Mac does. My son, the computer genius with a Masters from Georgia Tech bought a Mac last year because it was the "best on the market at that time" so I have had many demonstrations of the ICONs, GEM and the 68000 CPU. With Atari combining all of that capability with their color graphics approach, the 520 has got to be a fantastic computer. And it's only $599! Add to this, combining the 512K full memory plus 192K ROM augmented by a 128K ROM cartridge being supported with the $159 3½ inch drive that dumps data at a 1.33 MegaByte/Second rate you've got a real computer. (I think the disk transfer rate means that it takes a half second to dump the full memory to a disk.) The system is not expandable, but with this much power, expansion may never be required. I'm sure if necessary, some disk file chaining techniques could be used to expand to a virtual memory environment.

It has the disk handlers in ROM along with the desk Top Manager program. They will be going to the standard ASCII for the 520 and away from the ATASCII currently used in the 6502 systems. The disk drives will be the 3½ inch type with the Sony format. The disks will be single sided, but when they hold 500K bytes, who worries. Disks will run about $4 each. I figure that will change as demand increases. Several drives can be chained together; just how many, Steve wasn't sure, but surely up to four.

The whole computer and keyboard was in a sturdy, functional package about the size of the PC keyboard alone. It had a keypad on the right side and !!! one-finger cursor control. (No more CTL-Arrow, just Arrow.) It has two joystick ports, one of which is used for the two button Mouse controller. Only one button is used at this time. The other one is for future expansion (i.e., right hand cartridge approach). The Mouse as a controller when combined with the GEM/ICON approach is an excellent tool. There are well planned output ports such as both serial and parallel printer ports that require no new interfaces. The drivers are in ROM. There are ports for both the RGB monitor and TV RF line. Steve had both the monitor and the TV on-line at the same time for viewing convenience. The difference in resolution was notable. The TV was not bad; the monitor was just so much better. It, and the 130XE come with built in MIDI that can be tied into high quality music synthesizers. There is also a port for the new 10 Mb hard disk that may become available this fall.

The DTM was the only demonstration presented on the 520. Atari has not allowed software outside their control so far. The DTM has preference control of the ICONs, like locating all on the right side of the screen. It has a drop down menu for Desk, File, View and Options. The later is where you set your preferences such as Mouse double-click speed control which is like some type of debounce control adjustment. If you want a high speed Mouse usage, you can adjust the time between pulses. The Desk allows you to adjust your ICON locations and such. The four ICONs shown were designated File, Floppy, Trash and Cartridge. The drop down File menu allows you to page through a series of drawers in which ten envelopes are contained, each of which contains a program or data files. The View allows you to create windows for looking at, for example, four different data files at the same time in a configuration you select. Having been shamed by my son and his Mac, I think they are equivalent and the Atari is in COLOR! The 520 will also have a screen calculation supported by either the Mouse or the keypad.

130XE Computer

The 130XE is classed as a repackaged 800XL with an additional 64K memory controlled by the bank selection technique. They have gone back towards the DOS 2.0 calling it DOS 2.5. It will handle a true double density disk format also. The package looked and felt comfortable and of good quality. It can use all of the 800 programs without the translator disk. If the program worked on the XL it'll work on the XE. It will sell for around $169. It has to use the 1050 disk drives for now. They think the 3½ drive will become available in the fall. They are developing a combined version of AtariWriter, Spell Checker and MailMerge. They had a graphics demo from a German that was one of the sharpest I've ever seen on an Atari. It was using the RGB monitor but I have to say it was one of the clearest I've seen produced by any computer. Their medium resolution monitor will be $299 to $349.

To Buy It or Not To Buy It

I did like the 130XE but not as much as the 520ST. I would have bought it that night but the best I could do is put down a deposit for the first delivery about the last of April. I settled for the 520ST with one 3½ inch disk drive. I hope to get several of the two dozen $80 programs expected to be released with the first round of computers. They say that there should be enough out by July/August to satisfy us Atari fanatics.

As one of the first 520 owners, I plan to write a follow up to this on what it's really like to be able to use one of these top quality computers for hours and hours. ●

Applying The Atari

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and that's all. I am mainly interested in learning about the POKEs and the PEEKs unique to the XL but don't want to start spending hundreds of dollars on books. I hope you can include this topic in your column. I think many of your other readers would also appreciate this information on the XL.

Douglas Mann
Santa Rosa, CA

As the price of Atari computers declined, so did the amount of documentation included with the machines. This is unfortunate, but don't fear... Next month I'll list some of the important memory locations on the XL and how to use them.

More on Multi-Luminance

Those of you who entered last month's Multi-Luminance program might be interested in adding this attractive shading capability to your own BASIC programs and Graphics 0 screens. The sample application program demonstrated two of the many uses of the simultaneously displayed screen tints. It printed a menu, bordered on top and bottom by triangles composed of varying shades of color. This makes for a truly appealing display, otherwise unattainable without the use of the display list interrupts employed by the Multi-Luminance routine. The menu operation further illustrates this ability to mix luminances on the screen by highlighting the selected option.

To use the Multi-Luminance program in your own BASIC program, your program must first GOSUB 30000 to initialize the routine. The routine must be reinitialized after a GRAPHICS statement, and therefore a GOSUB 30000 should follow every GRAPHICS 0 command.

The luminance values are stored in memory locations 1767 through 1790, one location for each line of the screen. There are eight possible luminance levels ranging from zero through 14 on every even number (two, four, six, and so forth). Upon initialization, all locations are loaded with a luminance level of ten, the value that is normally used for the GRAPHICS 0 display.

Let's try changing some luminances. Enter the Multi-Luminance program (*Program 1* of last month) and type GOSUB 30000. When you get the READY prompt, type:

```
POKE 1767,0
```

This will set characters on the first line of the screen to the lowest intensity. This corresponds to the command, SETCOLOR 1,0,0, but affects only the line controlled by location 1767 — the first line. Now when you type or print on the first line, the characters will be darker than those on the other lines of the screen.

The following formula can be used to set a specific line of the screen to a certain luminance, where LINE is the line of the screen (zero through 23) and TINT is the luminance value (zero through 14, even numbers):

```
POKE 1767 + LINE,TINT
```

Note that the first line of the display is numbered line zero; the second line, line one; etc.

Dynamic luminance changes are possible as well. Type in this example and RUN it:

```
10 FOR I = 0 TO 23
20 POKE 1767 + I,PEEK(20)
30 NEXT I
40 GOTO 10
```

Have fun with the Multi-Luminance routine. If you dream up any fascinatingly unique applications for this program, please write and tell us about it.

Mailing List Program

This month's feature program, *Mailing List*, is our longest one ever — over 130 lines. It's a program that stores names and addresses, allows user categorization, searches by name, and prints by category on mailing labels. You'll truly appreciate this program whenever you have to send anything to anybody — greeting cards to friends and relatives, letters to clientele, etc. In future months, we might add additional routines to this program to make it even more powerful.

Disk Drive Required

Since *Mailing List* relies extensively on *random access* storage, a disk drive is needed.

Random access means that any portion of the data can be read at any time. In the mailing list program, random access allows the program to read one of the last names on the disk, and then go back and read one of the first names if necessary.

Names on a cassette tape can only be read sequentially, or in the order in which they were saved on the tape. For searching or editing to be feasible, *all* of the data on cassette would have to be loaded into the computer memory and then resaved when operations on the data were finished. This would limit the amount of data storage to the amount of memory re-

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Berserker Raids Continued from page 47

of the game you would devote 100% of the resources to constructing ships, since you want the ships as soon as possible. Later, you might want to devote resources to raising the technology level of some bases (for building more capable ships) and the productivity level of other bases (for the times when rapid ship construction is essential). This is an interesting aspect of the game. With skill and practice, you can determine how to allocate resources to yield the most effective combination of star bases.

Controlling Ships

Each ship constructed can be commanded to travel to other bases, unload cargo, resupply itself with cargo or orbit the star base. As a maximum of 10 ships can be in any player's fleet at one time, a "scrap" command destroys a specified ship, thereby allowing the construction of a more advanced one. When landing on a base owned by another player or a berserker, armed ships can be ordered to attack the base. On the other hand, when opponent's ships or berserkers are landing on a base owned by you, you can command your ships to retreat, dodge, or attack the incoming invaders.

Winning The Game

As the game progresses and battles become more frequent, the ownership of star bases can change hands several times. When one side has finally captured all ten star bases, a message, such as "Jeff is victorious - berserkers have been eliminated," is displayed and the game ends. A handy feature of this program permits the game play to be interrupted and saved to disk for continuation at a later time. A typical game can take several hours.

Scenarios

The idea of using a story line to set the action of the game play is a novel idea, but only one lengthy scenario is included in the documentation. "The Hunting of Hyperion," as this scenario is called, is a respectable eight pages in length. The authors apparently had grown weary, however, by the time they got to writing the other nine scenarios, each of which consists of approximately one paragraph. Take "Dijon

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Applying The Atari Continued from page 48

maining in the computer.

Even if the memory limitations are of no concern to you, the cassette recorder is far too slow for comfortable mailing list work.

The Program

Type in *Mailing List*. It is highly recommended that you use *Program Perfect* to enter this one, since there is a great chance for error. When you've entered the entire program, SAVE it to diskette. (See the end of this article for information on *Program Perfect* and on purchasing a diskette of *Mailing List*. Since Mailing List stores its data on diskette. You might want to insert a blank, formatted diskette into the disk drive before running the program. This will let you store the greatest number of names and addresses. This disk will be referred to as the *data disk*. You can use the disk on which you've saved the program, if you really want to, but you'll have less room remaining for storage.

Now RUN the program. **Figure 1** shows the menu screen that is displayed if everything is working properly.

Adding Names

Naturally, little can be done with a mailing list program without the names and addresses. Hence, the first thing you'll want to do is select the ADD NAMES option. Press *A* for this operation. A data file will be created on the diskette. In a few seconds you'll be on the ADD DATA screen.

If you want to use both upper and lower case letters for your mailing list, press the CAPS/LOWR key (or the CAPS key on the XL/XE) before you start typing. Don't use all capitals for some names and a combination of capitals and lower case for others or you'll run into problems when searching for a name. A maximum of 32 characters can be typed for each data line. The CTRL (CONTROL on the XL/XE) and arrow keys can be used to move the cursor around to

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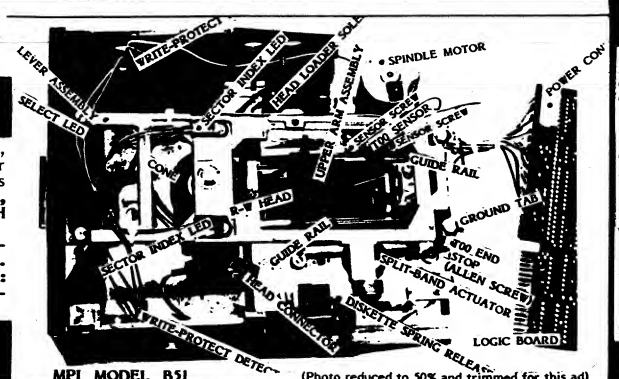

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Applying The Atari
Continued from page 87

change anything you have typed. Use the BACK SPACE and CONTROL-INSERT keys for their respective, one-character operations. To delete an entire line, use SHIFT-DELETE. The inverse video and graphics characters cannot be typed so as to facilitate the use of the search feature and also because the majority of printers cannot print these characters.

Now type in a name and press RETURN. Next type in the street address, press RETURN, and enter the city, state and zip code.

The next line is the category. Up to eight characters can be entered as a category name to classify the name you have entered. Later, names can be printed out according to category. For example: You can classify your relatives as RELATIVE, and your clients as CLIENT. Then, to invite your relatives to a get-together, you would specify the RELATIVE category when printing labels. To send out information to your clientele, you would specify the CLIENT category.

You could put the category name to good use in a birthday-oriented mailing list: All acquaintances with a birthday in, say, March, would be given the name MARCH as a category. Then, just before March comes around, you could print out labels with the names and addresses of those with a birthday in that month. Stick the labels on some card envelopes and no more late or forgotten birthdays! As you can see, this program's ability to categorize is an extremely practical and versatile feature.

After you've typed the category, press RETURN. You'll get a "MORE NAMES (Y/N)?" prompt. If you've got more names to enter, press *Y* and type them in, otherwise press *N* to get back to the menu.

Editing

Once you've built your mailing list, you might have to go back to change some entries, especially if you've discovered a typographical error or someone has changed his address. Press *E* for the Edit screen.

On the Edit screen you'll get a "CYCLE OR SEARCH (C/S)?" prompt. Press *C* if you want to cycle back and forth among the various entries. The "<" and ">" keys are used to move backwards and forwards, respectively. Attempting to go beyond the last entry will give you a nasty "LAST NAME IN FILE" message, while trying to move ahead of the first entry will give you a "FIRST NAME IN FILE" message. At any point, you can use the editing keys to change an entry. The changes will automatically be recorded on disk.

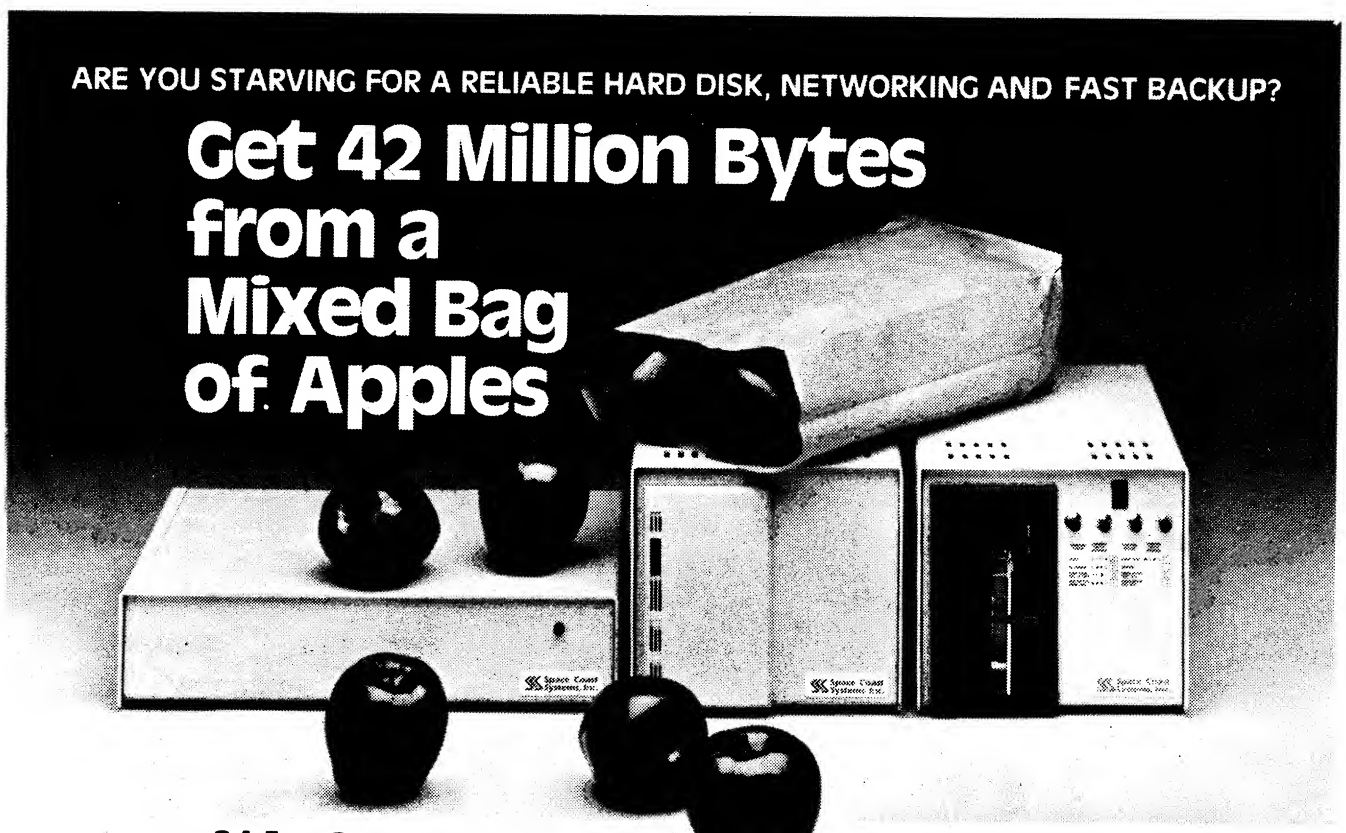
Deleting a name is accomplished by changing the category of the name to DELETED. The name isn't actually deleted (thus you can reinstate it at a later time if necessary) but it is ignored when printing out labels. You can replace a name in the DELETED category with a new name if you so desire, but be sure to change the category name.

Press ESC when you've finished making changes and you'll be returned to the menu screen.

Search Feature

Pressing *S* for the "CYCLE OR SEARCH" prompt lets you search for a name. You'll be asked whether you want to "SEARCH BY FULL NAME OR LAST (F/L)?"; Press *F* to search for an entire name, or for any portion of the beginning of the full name. For example: to find our editor-in-chief,

Continued on page 92



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Applying The Atari
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Stan Veit, we could search for "Stan Veit" or, if there's only one Stan in our list, we could search for "Stan." If we are using only capital letters, then we'd search for "STAN." (Now you can see why it is important to be consistent with the use of either all capitals, or both capitals and lower case.)

Your other option is to search for the last name (Press *L*). This time, to find Stan, we'd enter "VEIT." **Figure 2** shows how we can find "Computer Shopper" by searching for "Shopper."

Once you find the name you've searched for, you can make changes in the data with the editing keys, or you can use the "<" and ">" keys to move to see (and change if desired) the data preceding and following the displayed data.

Printing The Names

Now for the fun stuff. Of course, you'll need a printer — any kind will do. Position your mailing labels in your printer. If you are using double-width labels (two labels horizontally) then press *2* for the "NUMBER OF LABELS ACROSS (1/2)?" prompt, otherwise press *1*. Next you'll be asked to input the spacing between horizontal labels (if you have two labels across) and the spacing between vertical labels. Six and four are the values for these inputs, respectively, for labels of standard size and spacing. If you are using labels of other sizes, you should experiment to find the correct values for proper printing.

Once all spacing has been set, you're asked which category to print out. If you want to print every name and address on the data disk, regardless of its category (except for those marked DELETED), enter "ALL," otherwise type the specific category of the names you want printed (i.e. "CLIENTS"). When the "PRESS RETURN WHEN READY" prompt appears, press RETURN and your labels will be printed. **Figure 3** shows a sample output.

```
Mr. J. Smith
100 Disk Drive
Baltimore, MD 21219

Mrs. C. Douglas
100 RAM Road
Pawcatuck, CT  06379

Mr. B. Rogers
100 BASIC Blvd.
Floral Park, NY  11004

Ms. S. Jackson
100 POKE Place
Lima, OH  45805

Mr. E. Carson
100 LIST Lane
Burlington, IA  52601
```

Figure 3

List Names

For a simple list of the names stored on the data disk, press *L* on the menu. Only the names, not the addresses, will be printed. Those names that have been deleted will also be printed, but they will be preceded by an asterisk (*).

Free Disk Memory

This will tell you how many sectors or blocks are remaining on your diskette. When this number becomes very low, you are running out of room and should begin using an additional diskette. Incidentally, the data diskette should only be changed when on the main menu screen so that the proper files will be opened on the new disk.

Next Month

We'll get into more detail on *Mailing List*, look at some POKEs and PEEKs on the XL, learn how to add a numeric keypad to the Atari, enter a new program called ATASCII Lister, and (whew!) look at some more reader mail.

Readers questions, comments and contributions are welcome. Please enclose a self-addressed, stamped envelope (SASE) for a personal reply.

A cassette or diskette of any program listed in this column is available from the author for $5.00, postpaid. Specify DOS 2 or DOS 3 when requesting a diskette.

Program Perfect is a utility used to check for typing errors in programs entered from this column. Readers may send a SASE for a listing or $5.00 for a cassette or diskette.

Address all correspondence to:

Jeff Brenner's
"Applying The Atari"
c/o Computer Shopper
P.O. Box F
Titusville, FL 32781-9990 ●

MAILING LIST

```
UIJ 10 REM MAILING LIST PROGRAM
KFJ 20 REM COPYRIGHT 1985 JEFF BRENNER
WQJ 30 DIM NAME$(32),ADDR$(32),CSZ$(32),CAT$(8),Q$(1),KB$(255),SP$(32),L$(1)
QMJ 40 DIM NAME2$(32),ADDR2$(32),CSZ2$(32),CAT2$(8),NUL$(1)
BHJ 50 SP$(1)=CHR$(32):SP$(32)=CHR$(32):SP$(2)=SP$:L$=CHR$(155)
VRJ 60 KB$(1)=CHR$(0):KB$(255)=CHR$(0):KB$(2)=KB$:RESTORE 80
INJ 70 KB$(30)="K":KB$(122)="K":KB$(31)=KB$(30):KB$(60,60)=SP$:KB$(62,62)=SP$
LFJ 80 FOR I=1 TO 7:READ J:KB$(J,J)="K":NEXT I:DATA 95,155,156,126,127,254,255
EBJ 90 DIM A$(110),B$(2),C$(1),FILE$(30),FILE2$(30),E$(2)
QHJ 100 E$=CHR$(156):E$(2,2)=CHR$(157):FILE$="D:FILE.DAT":FILE2$="D:POINT.DAT"
CVJ 110 B$=CHR$(30):B$(LEN(B$)+1)=CHR$(31)
KIJ 120 OPEN #1,4,0,"K:":OPEN #3,4,0,"E:":OPEN #4,9,0,"E:"
RVJ 130 CLOSE #5:CLOSE #2:PRINT CHR$(125);"MAILING LIST PROGRAM":POKE 84,4
QZJ 140 RESTORE 160:FOR I=1 TO 5:READ A$:PRINT CHR$(ASC(A$)+128);A$(2,LEN(A$))
LEJ 150 PRINT :PRINT :NEXT I
WDJ 160 DATA ADD NAMES,EDIT,LIST NAMES,PRINT,FREE DISK MEMORY
RAJ 170 POKE 694,0:POKE 702,64:PRINT CHR$(156);"SELECT: ";:GET #1,A
RGJ 180 RESTORE 150:FOR I=1 TO 6:READ A$:IF ASC(A$)<>A THEN NEXT I:GOTO 170
UEJ 190 PRINT CHR$(125);
QKJ 200 FOR J=1 TO LEN(A$):PRINT CHR$(ASC(A$(J))+128);:NEXT J:PRINT :PRINT
QXJ 210 PRINT :ON I GOTO 230,650,1040,1120,1350
CPJ 220 POKE 85,2:FOR I=1 TO 32-(J=4)*24:PRINT CHR$(13);:NEXT I:POKE 85,2:RETURN
PCJ 230 TRAP 250:OPEN #2,9,0,FILE$:OPEN #5,4,0,FILE2$:TRAP 40000:INPUT #5;S,B
WVJ 240 CLOSE #5:GOTO 280
QVJ 250 IF PEEK(195)<>170 THEN PRINT "ERROR #";PEEK(195):GOTO 1020
BPJ 260 CLOSE #2:B=-1:S=-1:OPEN #2,8,0,FILE$:CLOSE #2:OPEN #2,8,0,FILE2$
SBJ 270 PRINT #2;S;L$;B;L$:CLOSE #2:GOTO 230
SNJ 280 GOSUB 290:EDIT=0:GOTO 320
NSJ 290 POKE 84,6:RESTORE 310:FOR J=1 TO 4:GOSUB 220
WPJ 300 READ A$:GOSUB 640:PRINT A$:PRINT :PRINT :NEXT J:GOSUB 1030:RETURN
GRJ 310 DATA FULL NAME,ADDRESS,CITY/STATE/ZIP,CATEGORY
OKJ 320 X=0:POKE 84,5:PRINT B$;:Y=PEEK(84)
QZJ 330 POKE 694,0:CC=CC+1:M=0:IF PEEK(84)=14 THEN M=24
ODJ 340 GET #1,K:IF KB$(K,K)="K" AND PEEK(85)<34-M+(K=155) THEN PRINT CHR$(K);
OZJ 350 IF K>64 AND K<123 THEN 330
HFJ 360 IF K=27 AND EDIT=1 THEN RETURN
SJJ 370 IF K=27 THEN 130
YYJ 380 IF (K=60 OR K=62) AND EDIT=1 THEN TRAP 880:RETURN
KLJ 390 IF PEEK(85)>34-M THEN POKE 85,34-M:PRINT B$;
ODJ 400 IF (K=126 OR K=30) AND PEEK(85)=34-M THEN POKE 85,34-M:PRINT CHR$(K);
RVJ 410 Y=Y-(K=28)*3:Y=Y+(K=29)*3:Y=Y+(K=155)*3:IF Y<4 OR Y>14 THEN Y=PEEK(84)
BZJ 420 IF Y<>PEEK(84) THEN POKE 84,Y:PRINT B$;
KTJ 430 IF PEEK(84)=14 AND PEEK(85)>10 THEN POKE 85,10:PRINT B$;
ULJ 440 IF K<255 THEN 460
ATJ 450 X=PEEK(85):POKE 85,34-M:PRINT CHR$(254);:POKE 85,X:PRINT B$;
CLJ 460 IF K=156 THEN PRINT CHR$(157);
TDJ 470 IF PEEK(84)=15 AND EDIT THEN GOTO 320
QHJ 480 IF PEEK(84)=15 THEN NAME$=SP$:ADDR$=SP$:CAT$=SP$:CSZ$=SP$:GOTO 500
BSJ 490 GOTO 330
YYJ 500 POKE 84,5:INPUT #4;NAME$:POKE 84,8:INPUT #4;ADDR$
XZJ 510 POKE 84,11:INPUT #4;CSZ$:POKE 84,14:INPUT #4;CAT$
NEJ 520 IF LEN(NAME$)<32 THEN NAME$(32)=SP$
MTJ 530 IF LEN(ADDR$)<32 THEN ADDR$(32)=SP$
JNJ 540 IF LEN(CSZ$)<32 THEN CSZ$(32)=SP$
EFJ 550 IF LEN(CAT$)<8 THEN CAT$(8)=SP$
DJJ 560 IF EDIT=1 THEN POINT #2,IS,IB
GGJ 570 NOTE #2,S1,B1:PRINT #2;S;L$;B;L$;NAME$;L$;ADDR$;L$;CSZ$;L$;CAT$
HNJ 580 IF EDIT=1 THEN RETURN
EWJ 590 S=S1:B=B1
EUJ 600 POKE 84,21:PRINT "MORE NAMES (Y/N)?";:GET #1,Q:IF Q=89 THEN 630
WWJ 610 OPEN #5,8,0,FILE2$:PRINT #5;S;L$;B;L$;:NOTE #2,S,B
OIJ 620 PRINT #5;S;L$;B;L$:CLOSE #5:CLOSE #2:GOTO 130
QQJ 630 PRINT CHR$(125);:GOTO 280
DLJ 640 FOR I=1 TO LEN(A$):A$(I,I)=CHR$(ASC(A$(I,I))+128):NEXT I:RETURN
BSJ 650 TRAP 670:OPEN #2,12,0,FILE$:NOTE #2,IS,IB:TRAP 40000
QYJ 660 CLOSE #5:OPEN #5,4,0,FILE2$:INPUT #5;FS,FB,FS,FB:GOTO 680
PHJ 670 PRINT "ERROR #";PEEK(195):GOTO 1020
FNJ 680 POKE 84,19
RJJ 690 PRINT "CYCLE OR SEARCH (C/S)?";:GET #1,Q:IF Q=83 THEN SE=1:GOTO 720
LTJ 700 PRINT CHR$(Q);:IF Q<>67 THEN PRINT CHR$(156);:GOTO 680
LGJ 710 PRINT :SE=0
KQJ 720 IF SE=1 THEN GOSUB 890
MEJ 730 PRINT "PRESS > TO MOVE FORWARD":PRINT "PRESS < TO MOVE BACKWARD"
EOJ 740 GOSUB 290
FDJ 750 ST=IS:BT=IB:NOTE #2,IS,IB:INPUT #2;S,B,NAME$,ADDR$,CSZ$,CAT$
DJJ 760 POKE 85,2
RXJ 770 POKE 84,5:PRINT NAME$:POKE 84,8:PRINT ADDR$:POKE 84,11:PRINT CSZ$
IUJ 780 POKE 84,14:PRINT CAT$
ENJ 790 POKE 84,3:PRINT SP$
IOJ 800 CC=0:EDIT=1:GOSUB 320
HNJ 810 IF CC>1 THEN POKE 85,2:POKE 84,15:PRINT B$;:GOSUB 480
SJJ 820 IF K=27 THEN 130
ECJ 830 IF K=60 AND (S>=0 OR B>=0) THEN POINT #2,S,B:GOTO 750
JTJ 840 IF K=62 THEN NOTE #2,S1,B1:IF S1<>FS OR B1<>FB THEN 750
MCJ 850 IF K=62 THEN A$="LAST NAME IN FILE":GOTO 1010
NKJ 860 IF K=60 AND S+B<0 THEN A$="FIRST NAME IN FILE":GOTO 1010
BWJ 870 GOTO 800
PFJ 880 TRAP 40000:PRINT "ERROR #";PEEK(195):GOTO 1020
ROJ 890 POKE 85,2:PRINT E$;"SEARCH BY FULL NAME OR LAST (F/L)?";
OAJ 900 GET #1,Q:IF Q<>76 AND Q<>70 THEN 890
IHJ 910 POKE 85,2:PRINT E$;"SEARCH FOR WHAT NAME";:INPUT A$
OVJ 920 POINT #2,IS,IB:TRAP 1000
OQJ 930 NOTE #2,ST,BT
OCJ 940 INPUT #2;S,B,NAME$,ADDR$,CSZ$,CAT$
IEJ 950 IF Q=70 THEN IF NAME$(1,LEN(A$))<>A$ THEN 930
TGJ 960 IF Q=70 THEN 990
MGJ 970 FOR I=1 TO LEN(NAME$):IF NAME$(I,I)<>CHR$(32) THEN NEXT I:GOTO 930
IJJ 980 TRAP 930:IF NAME$(I+1,I+LEN(A$))<>A$ THEN 930
YTJ 990 PRINT "FOUND":POINT #2,ST,BT:RETURN
BOJ 1000 PRINT "NOT FOUND":GOTO 1090
UVJ 1010 POKE 85,2:POKE 84,3:GOSUB 640:PRINT A$:GOTO 800
FNJ 1020 FOR I=1 TO 500:NEXT I:GOTO 130
IRJ 1030 POKE 84,23:A$="PRESS ESC FOR MENU":GOSUB 640:PRINT A$;:POKE 85,2:RETURN
IHJ 1040 TRAP 1090:OPEN #2,4,0,FILE$:OPEN #5,4,0,FILE2$:INPUT #5;I,I,FS,FB
SIJ 1050 NOTE #2,S,B:INPUT #2;I,I,NAME$,ADDR$,CSZ$,CAT$
UYJ 1060 IF CAT$(1,7)="DELETED" THEN PRINT "*";
UNJ 1070 PRINT NAME$:IF PEEK(764)=28 THEN 1100
FGJ 1080 GOTO 1050
BRJ 1090 PRINT :GOSUB 1030
TJJ 1100 GET #1,Q:IF Q<>27 THEN 1100
DCJ 1110 GOTO 130
OEJ 1120 NAME$=NUL$:NAME2$=NUL$
FBJ 1130 PRINT E$;"NUMBER OF LABELS ACROSS (1/2)?";:GET #1,Q:? CHR$(Q);
PHJ 1140 IF Q<49 OR Q>50 THEN 1120
FQJ 1150 Q=Q-49:PRINT :IF Q=0 THEN 1170
QCJ 1160 PRINT :PRINT "SPACING BETWEEN HORIZONTAL":PRINT "LABELS (6)";:INPUT HS
JVJ 1170 PRINT :PRINT "SPACING BETWEEN VERTICAL":PRINT "LABELS (4)";:INPUT VS
OVJ 1180 CAT2$=SP$:PRINT :PRINT "CATEGORY (ALL)";:INPUT CAT2$
VDJ 1190 IF CAT2$<>"ALL" THEN IF LEN(CAT2$)<8 THEN CAT2$(8,8)=CHR$(32)
SSJ 1200 PRINT :PRINT "TURN PRINTER ON AND POSITION LABELS."
FPJ 1210 A$="PRESS RETURN WHEN READY":GOSUB 640:PRINT A$;
UVJ 1220 INPUT #1;A$:OPEN #5,8,0,"P:"
TZJ 1230 TRAP 1330:OPEN #2,4,0,FILE$
PSJ 1240 INPUT #2;S,B,NAME$,ADDR$,CSZ$,CAT$
BRJ 1250 IF CAT2$<>"ALL" AND CAT$<>CAT2$ THEN 1240
FRJ 1260 IF CAT$(1,7)="DELETED" THEN 1240
IYJ 1270 IF Q=0 THEN NAME2$=NAME$:ADDR2$=ADDR$:CSZ2$=CSZ$:GOTO 1290
VUJ 1280 IF LEN(NAME2$)=0 THEN NAME2$=NAME$:ADDR2$=ADDR$:CSZ2$=CSZ$:GOTO 1240
LRJ 1290 PRINT #5;NAME2$;:IF Q THEN PRINT #5;SP$(1,HS);NAME$;:NAME$=NUL$
TKJ 1300 PRINT #5;L$;ADDR2$;:IF Q THEN PRINT #5;SP$(1,HS);ADDR$;:NAME2$=NUL$
LOJ 1310 PRINT #5;L$;CSZ2$;:IF Q THEN PRINT #5;SP$(1,HS);CSZ$;
FLJ 1320 FOR I=1 TO VS:PRINT #5:NEXT I:GOTO 1240
VRJ 1330 IF LEN(NAME$)=LEN(NAME2$)*Q=0 THEN 130
PSJ 1340 NAME$=NUL$:TRAP 1330:Q=0:GOTO 1290
WFJ 1350 OPEN #5,6,0,"D:*.*"
XCJ 1360 INPUT #5;A$:IF A$(1,1)=CHR$(32) THEN 1360
DSZ 1370 PRINT A$:GOTO 1090

[END OF LISTING]
```


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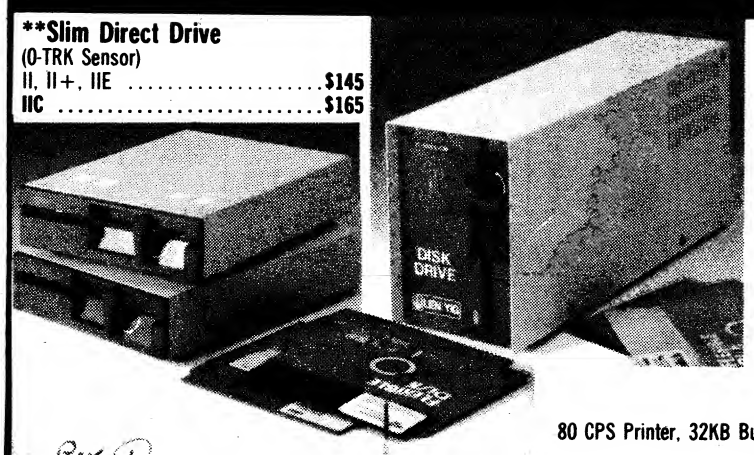

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Berserker Raids
Continued from page 87

Cluster," for example, which reads as follows:

Ships of Player One are arriving at a world (at Star Nine) held by Player Two. A quick decision must be reached on whether to fight, or to ally against berserkers.

Yes - that's the entire "scenario."

Documentation

A partially redeeming feature of this package is the 64 pages of documentation. The manual gives you adequate preparation for game play by taking you through the steps of a sample game. The clearly defined terminology used for the ships and bases makes most of the documentation easy to understand.

Graphics? Sound Effects?

The big question on this game is "What happened to the graphics?" Why would a game with a space-war theme released in 1985 not employ at least low-resolution graphics (let alone color) nor sound-effects? Apparently the authors realized their negligence in this area as they added a short shoot-'em-up sequence with high resolution, color graphics as an introduction to the game. After that first screen, though, it's black and white and asterisks and plusses for the remainder of the game. Color graphics could have been applied nicely to this program: to the maps, the various ships, the ensuing berserkers, etc. Yet, for one reason or another, the graphics were left out. As is, the game could have conceivably come right out of a **Creative Computing** magazine listing of five years ago. Sure, the game is stimulating in some respects without the graphics and sound, but for $34.95 we should expect a lot more.

Some other not-so-good comments: The game, or at least the Atari version used for this review, is written in BASIC and hence is often irritatingly slow. Occasionally, I found myself hitting the keyboard when screen changes were taking too much time.

In short, **Berserker Raids** is slick packaging and substantial documentation but, alas, a game that is slow, primitive, and lacking in features that make a game worth $34.95. Perhaps the "THANK YOU FOR PLAYING" message displayed at the end of the game best confirms my conclusions. A game shouldn't have to thank you for playing; a truly invigorating game will have you thanking it.

Ratings

Design *
Amusement level **
Documentation ***
Value *
Average *½

*½

Requirements:

Atari 400/800/XL: 48K, BASIC, and disk drive.

Apple II, II+, IIe: 48K and disk drive.

IBM-PC: 64K, Monochrome or Color Video Board, Dos 1.0, 1.1 or 2.0, and disk drive.

Commodore 64: Disk Drive.

Program authors: Fred Saberhagan and Lloyd Johnson.

Price: $34.95

Warranty: 30 days, free replacement.

Manufacturer: Simon and Schuster.

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C. Itoh Prowriter 8500/8510 (NEC 8023-A) (Apple DMP)	$5.50	$5.30	$4.60
COLOR	7.70	7.40	6.40
Diablo Hytype II Nylon	4.50	4.00	3.60
COLOR	6.30	5.60	5.05
Diablo Hytype II M/S	4.35	4.05	3.90
COLOR	6.10	5.65	5.45
Epson MX/FX/RX 70/80	5.00	4.75	4.50
COLOR	7.00	6.65	6.30
Epson MX/FX/RX 100 Cartridge	7.00	6.75	6.50
COLOR	9.80	9.45	9.10
NEC Spinwriter 5500/7700 M/S	4.90	4.60	4.30
COLOR	6.85	6.45	6.00
NEC Spinwriter 5500/7700 Nylon	5.00	4.75	4.50
COLOR	7.00	6.65	6.30
Okidata 80/82/92 Nylon (Spool Ribbons) Black	2.80	2.70	2.50
Okidata 80/82/92 Nylon (Spool Ribbons) Color	3.80	3.65	3.50
Radio Shack LP VI, VIII	5.50	5.20	4.90
COLOR	7.70	7.25	6.85
Tally Spirit 80 M/S (Black Only)	8.10	7.60	7.10

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We have ribbons for most printers. Call for prices and availability.

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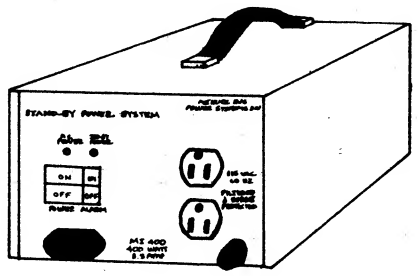

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